When Design Meets Hollywood: Instructional Design in a Production Studio Environment

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This chapter tells the story of an interactive new media design firm in Austin, TX, that successfully integrated instructional design processes with management and production processes based on a Hollywood film studio model. In the process of this integration, user experience design methods adapted from fields like product design and human–computer interaction were also incorporated into the instructional design processes used in the company. We also tell the story of how this integration created an approach to instructional design that focused on learning experiences rather than traditional instructional design methods and concerns. Along the way, much was discovered about how designers work in the context of a creative company, how creative design is managed, and how characteristics of design practice in this setting might be brought to universities to help students learn to be effective learning experience designers.

The story is based on what happened during an ethnographic research study at the company (we'll call the company HC), where the first author acted as participant observer on more than a dozen projects over the course of 2 years. His roles included being a subject matter specialist, an instructional designer, and an evaluator (see Notes for details about data collection and analysis). The first author was challenged by the second author (the Vice President of the Learning Division at HC) to study and capture the processes being used to design learning experiences within the

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organization. As leader of a group that included more than 15 producers, designers, and production specialists, the second author's focus was on how to design high quality products while maintaining profits. As the capturing unfolded, the first author noticed how different the language, roles, and design approaches were from the traditional instructional design that is presented in the literature and taught at many universities. After 2 years, his analysis and reflections resulted in attempts to transform how instructional design and development could be taught at a university. The differences in approach to design, along with the transformation of teaching that resulted from the analysis and reflection, are described below.

Background

New media design companies are often organized based on their historic roots in the film industry. These firms are the latest evolution of an industry that has grown and changed for more than 100 years. Films, television, and digital media are created in production studios for a variety of reasons that are based in the history of Hollywood and the technology of filmmaking. Hollywood became the dominant location for movie production during the 1920s (Lampel & Shamsie, 2003), as the industry evolved along with the development of various film technologies that blended capabilities of scientific inventions with many art forms (theater, art, etc.). The earliest, pre-Hollywood films were produced by the people who developed and patented the technologies, such as Lumiere and Edison, but as Hollywood was established and grew to as many as 30 film studios in the early 1900s, organizational and physical structures called studios were established to efficiently manage the creative talents and to house the technologies.

By the 1920s movie production was streamlined to the point where large numbers of creative people with a variety of skills were employed under contract to a single studio. At the same time, studio sound stages evolved so that sound could be recorded and synchronized with the film, requiring large sets that were flooded with light. Following antitrust litigation, the studio system was dismantled in the 1940s, replaced by a contract system where independent production firms contract with studios for distribution of the films. In the 1960s, Hollywood met another threat from the television industry, which used similar production practices and organizational structures. But even though the medium had shifted from film to broadcast television signals, the approach to production remained very similar. And later, as new media firms emerged in the 1990s, they grew naturally from the Hollywood production model of film/television that had been established for nearly a century (Seidel, 2011). But the interesting thing for this chapter is that the Hollywood production model has also been adapted to other kinds of project-based activities, including e-business, learning (Lamos & Parrish, 1994), and consumer entertainment products such as video games. It should be noted, however, that the Hollywood production studio model described here is not the same as the design studio model that is currently being promoted as a pedagogical approach to teaching instructional design. The design studio model is based on the notion of an atelier (Brown, 2006)

as commonly employed in architecture and art education, and more recently adapted for teaching instructional design (Clinton & Rieber, 2010) and computer science (Brandt et al., 2011).

HC was one of the companies that successfully adapted a Hollywood production model to its interactive multimedia product design. Established in the late 1990s, HC was founded by two graduates of industrial design schools. The company was highly successful from the outset, with their first product winning awards for its interactive achievements (PRNewswire, 1997). Soon, the company grew and prospered to the point where 200+ employees worked in a large office building in downtown Austin. HC had acquired venture capital that allowed them to expand in Austin, as well as to merge with other studios in Tokyo and San Francisco, and, at the time the author visited, the company was preparing for a public stock offering. This fast growth was typical of the dot-com industry at the time, but unfortunately, the company did not make it through the bursting of the bubble (Abramson, 2005). It did not fail as a business. Rather, its success allowed it to fall prey to the merger and acquisition strategies so common in business.

The Context

The Austin "studio" (that is the term HC used when referring to its organization in conversation or in marketing publications) divided itself into divisions named Learn, Work, and Play, referring to the kinds of projects that were sought and completed. Supporting the three main groups of designers, producers, and associate producers (their terminology) were groups labeled Internet Design Group (everyone called them "the programmers," split between network specialists and interactive authoring experts), the Graphics Group (both 2D and 3D artists), and the Audio/Video Group. Additional support groups focused on business (marketing, sales, and management), legal (contracts and copyrights, etc.), all with the help of a limited clerical staff. In addition, there was a group of four or five individuals (led by one of the founders of the company) that focused on emerging technologies research to guide future projects and business opportunities.

Everything that happened in the business was associated with a project, either to produce a product or to provide a service for clients. In this sense, the studio model was ideal in that it provided the flexibility to reconfigure project-specific resources in a nimble fashion, which allowed the company to pursue a wide variety of clients. Even though there were Learn, Work, and Play divisions, project teams were assembled that often crossed these division lines. For example, one client brought several projects to the firm at the same time. Some of the projects involved consumer entertainment, while others were educational products. The studio executives assigned people to teams based on the nature of the product to be developed, but also cross-pollinated the teams with expertise from both Learn and Play groups so that the various teams could respond to client expectations, and so that both divisions could remain in a communication loop that kept everyone informed and updated, regardless of the project on which they worked.

Table 1 Categories and roles of project teams

Category	Role and typical activities
Producer	Engage with client; coordinate design, development, implementation, and evaluation processes; manage budget and team roles
Experience designer	Analyze opportunities, determine goals, conduct research with target learners, write proposal, requirements, and design docs
Associate producer	Assist producer and designer as needed
Graphics Group	Provide digital art as needed for docs and interactive products
Internet Design Group ("programmers")	Utilize interactive tools to develop systems to function as specified, including prototyping, testing, debugging, and quality assurance; provide web and server functions as specified; coordinate with client for implementation on client networks

The central person in the design and production of projects was the producer, who filled a combined role as a project manager and design team leader, with responsibilities that included budget, task scheduling, client engagement, facilitation of design meetings, and producing documentation. The producer also provided an important focus for teams by facilitating dialog around innovation and creativity in the projects and products under their supervision.

The producers often utilized assistant producers to help, especially on projects with a large scope or short time lines. The work was completed in teams, with personnel whose selection depended on the nature of the project requirements. Teams typically consisted of a producer (project and design team manager), a lead designer (specializing in interactive design and/or learning design), a graphic artist (responsible for the "look and feel"), and a programmer (responsible for programming the interactions for the interface and/or creating the functionality for web-based products). Depending on the scope, an associate producer might be added to assist the producer, or an audio/video media production specialist might be included on projects that emphasized a variety of multimedia. Other personnel configurations were created as needed because of the "flat" organizational structure of the studio that was both flexible and communicative (Meyer & Marion, 2010). People generally worked on two or three projects at a time, while producers generally worked on only one project until it was completed. Table 1 shows the various personnel categories and the roles they filled in the design and production process.

The managers of these groups of creative, design-oriented individuals were the executive producers (three individuals) and the group vice presidents (three individuals). They effectively built work cultures where a sense of pride in the work was highly evident. On many occasions, managers in meetings gave glowing compliments to the design or the product under consideration. Teams were encouraged to pin their work to the studio's "war wall" so that people on other teams could see the current state of work across the whole studio. There was a constant push for "spectacular" learning environments (a term used consistently by the second author to communicate his vision for the work) with a high production quality in terms of media and user experience.

In addition, producers and interactive designers were encouraged to pitch new ideas for products using a "green light" proposal process similar to what happens in Hollywood filmmaking. If the ideas were seen as viable and marketable, the company would support the idea through design, production, and marketing. This was an achievement that was coveted by the designers and producers in the firm, as most work came from outside clients. A green light for an internal project indicated a willingness to support innovation from within the organization, and helped to shape the creative culture of the organization (Fleming & Marx, 2006).

A driving part of the value proposition of HC was the repeatable convergence of creativity, innovation, and design. Through an operational structure that was highly blended across the various design and production groups, a scalable development process emerged. This process, led by the producer, always sought to delight the customer and the end users in the experiences provided by the product. Rather than solely relying on needs assessments and requirement analysis, the team would consider these data along with boundary-stretching ideas drawn from other experiences and disciplines, helping to position HC as a premium development studio. To warrant above-market pricing in a highly competitive space, the company needed to provide additional value to customers. This came by delivering more than what was asked for by the client. Much like Christensen's central thesis in *The Innovator's Dilemma* (1997), HC resisted implementing a process that was too customer-intimate. Instead, the project leadership was charged to drive design and development conversations that were always looking for creative and innovative solutions.

Like the customer-value proposition, the people-value proposition found in HC also focused on attracting, retaining, and engaging the very best people from a variety of disciplines to combine for a unique design solution. This approach allowed people from various backgrounds to contribute and continue to grow over time. Such creative expectations prevented burn out and attrition, and created a highly stable team that continued to push the design envelope again and again over multiple projects, multiple clients, and multiple years.

The project orientation of media production studios and other design firms supports and promotes creative activities while still allowing for discipline in project management, budget, and other business concerns (Meyer & Marion, 2010). HC exhibited many of the characteristics identified by those who study business management for creative industries (e.g., Pratt, 2009; Seidel, 2011). In particular, HC focused on user-centered design to understand the user (or learning) experience at deep levels. There was an alternating focus on both the overall system being designed and the details of subsystems. Teams were highly active and developed various communities of practice as well as knowledge sharing techniques. Development was agile, iterative, and began early in the process through a rapid prototyping strategy. Finally, management was "light-handed" (Meyer & Marion, 2010, p. 27), allowing teams to exercise limited autonomy to make decisions in consultation with the client, as long as the decision did not impact the budget significantly. This differs from other top-down management approaches that would have the team wait for a review meeting by executives in order to continue design and development.

The Design and Production Process

Unlike what is typically taught in universities using traditional instructional design models, the design practices of HC were first and foremost driven by business goals (Rhodes, 2000). The approach to design and development did not resemble the typical linear, circular, or waterfall design processes espoused by instructional design texts or taught in many instructional design courses. For one reason, HC was a for-profit company that emphasized product design for clients seeking their own profits from the product. As such, this was a different business model than many instructional design firms that are organized to provide a service to clients. For example, the first phase of any project was business development, and since HC was a new media company, only certain kinds of projects were pursued, and only certain kinds of clients sought the company's expertise. This meant that the media to be employed were determined before the project began, not after instructional strategies and objectives had been established, which is contrary to many traditional instructional design process models. The executive VPs, in collaboration with the executive producers, the sales staff, and the clients, developed a vision for the end product early in the process. The focus of design was not on needs or problems; instead, it was on opportunities. One executive described the process of envisioning and proposing solutions and products to the clients as an A, B, C, … Q approach:

> We work with the client to see what they think they want, and what success criteria they desire. Then we go away and meet to create a proposal that presents several options. The A option basically spits back to the client what they said they wanted. The B and C options go a bit further, adding some elements that are a bit flashy, but not significantly different other than in production values and costs. Then we hit them with the Q version that blows them out of the water. It meets all their criteria, and is spectacular to boot. It's something they would never have thought of, and they usually go for it, even if it costs more. (Rory, Company President, HC in Austin)

Once the client had accepted the proposal and contracts were signed, the VPs and executive producers assembled a design and production team. As mentioned earlier, members of the team were assigned based on their expertise and ability. Design and development followed an iterative process that had very interesting characteristics, including an emergent approach to design based on rapid prototyping processes, client input and approvals, management that was motivating to creative types, and open and frequent communication between team members, executive managers, and clients. The processes employed for design were very nimble, as indicated by one executive producer:

> We have to be ready for anything. The initial ideas presented in the proposal we send to clients are just the starting point. We have to nimble, and ready to change at any point in the process. We always tell clients that the design doc is a living document. It can change based on how we begin to understand the situation, how they react to our ideas, and how the prototype testing goes. (DeAnne, Producer in HC Learning division)

Other emergent design characteristics were apparent in the distribution (geographically, or even virtually) of many design ideas and decisions. A project web site was the center of communication and documentation for the design process,

storing project management plans and timelines, archives of all communications, and various files for approval of documentation or production elements (e.g., graphic treatments, scripts for video). The mission and vision documents for HC even expressed commitment to the "development of shared values to support effective client experience management." Such a dedication to experience, even at the level of managing client experience, reveals a desire to foster creativity at all levels of the organization, not just in design activities (McDonald, 2011; Sun, Williams, & Evans, 2011). This focus on experience went both directions: from HC to clients and from clients to HC. In one case, a client continued to contribute design ideas as the project unfolded. During the kickoff meeting, the client made evident his/her desire for effective and "magical" learning experiences that engaged children in playful activities and wonderment. He/she even went so far as to provide copies of Pine and Gilmore's *The Experience Economy* (1999) to everyone on the HC team. During the kickoff, the vice president used the theme of "841" to illustrate the ways in which "29 squared" could be remembered by children playing with the toys being designed. His presentation included magic tricks and other engaging play activities to drive home his experiential vision. Later, even though the design work had been turned over to HC designers, the client suggested in one communication: "I have some more ideas for our 841 games. How about hot potato with the toy? Or maybe a game where a story is told, and math facts have to be correctly recalled in order to move through the story?" (George, XXX Toys)

Overlapping design phases or layers (Gibbons & Duffin, 2001) that increased in detail were common. For example, rapid prototyping with significant client input and approval points was the common design and development strategy. In addition, information architecture was the primary concern for design decisions. In order to learn, HC designers expected learners to navigate through a variety of information organization and interaction schemes (spaces, categorizations, or people) to get to the desired or discovered materials and activities. Accessing information was for the purposes of solving problems or following a story, and information navigation strategies supported problem solving or narrative elements in the context of narrative situations.

Methods of contextual inquiry, including some of those suggested by Garrett (2003), were employed as design research methods. Task analyses, content identification and organization, as well as interviews with potential learners guided this form of design research (Beyer & Holtzblatt, 1999). A variety of possibilities for learner experience, presented in the form of scenarios, were distilled from learner stories, and used to design and develop detailed learning activities (Forlizzi & Ford, 2000). The use of principles of learning experience design appeared in many instances throughout the various projects. In particular, the four principles espoused by Parrish (2009) were common to many of the designs (e.g., plots, learners as protagonists, theme established through activity, and immersion in context). In fact, experiential world descriptions, complete with context, scenarios, characters, and storyline were established early in the process of the design, serving as a guide for further design activities and revisions (Wellings, 2008). For example, in one project designed to ready undereducated workers for positions in the high-tech industries in Texas (Russell & Bednar, 2001), an early form of "blended" classroom and computer-based interactive

learning was created. The learning experiences utilized stories, role playing, challenge-based learning activities, and collaborative learning to help prepare the learners.

Finally, the people who designed and developed the learning experiences greatly influenced the nature of the product through their personalities, beliefs, and philosophies about design and learning. They came from different backgrounds that didn't always involve education. The first author noticed early in his observations that these folks talked differently. It was apparent from their terminology and language that their approach diverged from traditional instructional design in important ways. One example was the intermingling of the terms user, learner, and audience. These terms all meant the same thing, and referred to the people who were the target users/learners for the design projects. In many cases, beliefs about how to create meaningful and engaging learning experiences were the main influences on their decision-making (Lang, 2008). Some of the quotes from interviews indicate the commitment of individuals within the organization to designing innovative and effective learning products, regardless of their backgrounds:

> It is amazing that we can engage with clients who are interested in developing rich learning environments that have not been feasible before the advent of the computer and web technologies. (Layla, trained as product designer)
>
> We want the users of our products to feel connected to a community of learners outside their particular location and setting. (Gina, trained as instructional designer)
>
> The interactive experiences that we design are always a part of a larger experience that enhances individual experience through group experiences. (Marshall, trained as a programmer)
>
> We can provide so many experiences that learners wouldn't be able to do, like going back in time or building a bridge. (Sam, trained as a graphic artist)

In summary, the work at HC broadened the focus of instructional and learning design to include considerations of life patterns, goals, activities, contexts, repeated use, sharing, emotion, and much more. Rather than focusing on discrete events or product functions, design decisions were made from the perspective of enhancing the person's experience with the product or situation (Pine & Gilmore, 1999). Experiences include both internal and external events, from individual cognitive experiences (Carlson, 1997), to engagement in situations that take place between an individual and the world (Dewey, 1934), to co-experiences that took place in social contexts (Forlizzi & Battarbee, 2004). The design process that was captured at HC revealed some of the principles of learning experience design that have been suggested more recently by various scholars. These included:

- Thinking of learning as transactions that enable transformative experiences, including the personal qualities and temporal dimensions that influence learning experiences (Krishnan & Rajamanickam, 2004; Parrish, Wilson, & Dunlap, 2010).
- Aiming toward higher levels of experiential learning that feature aesthetic (Parrish, 2009) and powerful learning experiences (Rowland & Divasto, 2001).
- Creating worlds (situations and contexts) in which the experience will take place (Wellings, 2008).
- Theming the experience (Pine & Gilmore, 1999).
- Considering a "bigger picture" involving transformational and aesthetic outcomes (Doering & Veletsianos, 2008).

Not only did these folks talk differently, they worked differently in terms of how they focused on design and production models that created spectacular and effective learning experiences.

Bringing the Hollywood Studio to the University

Implementing the approach to design and production described above to enhance learning at a university is not as simple as it may seem. But the first author tried with some degree of success (Nelson, 2003) to create a production studio environment for learning. This was not a design studio with a particular approach to pedagogy (e.g., Clinton & Rieber, 2010); it was a production studio with design processes based in real world contexts.

As such, this studio approach brought a large degree of authenticity to the learning experiences of the students who were involved. A focus on learning experience design and production was integrated into three graduate courses in instructional technology: an instructional design class, a software development class, and a project management class. In the past, these courses were taught using traditional approaches, including in-class exercises based on decontextualized examples, readings from texts and journals, minimal collaboration, and individual final projects as a basis of student evaluation. This approach created huge limitations for the students, as the courses and students were isolated from each other, and taught in silos even when offered in the same semester. Moreover, the courses were removed from practical and authentic contexts, forcing students to see the content of courses as isolated stages of a process, not as integrated activities within a single process.

In an attempt to transform these classes, several problem scenarios were compiled that included possibilities for real and simulated interaction with clients. The instructor sought out clients, and in cases where none were available, the instructor took on the role of client without telling the students he was doing so (a little e-mail trickery sufficed to keep students believing a real client was on the other end of the messages, but after the semester was over, the instructor revealed his actual role as a pseudo-client). A set of performance expectations for various roles in the scenarios was created, along with major deadlines and ideas regarding the various working relationship among the three classes. As various problem scenarios were introduced by the clients to students at the beginning of the semester, each class member was invited to volunteer for problem scenarios that were personally appealing, although this process was monitored to ensure that at least one student from each class was on each project team. Once all students had volunteered for a team, the performance expectations document was distributed. Members of each team collaboratively worked to devise processes of design and production that would result in suitable artifacts as their part in the scenario unfolded.

Because each team was autonomous, no single description of the events that semester could fully capture each team's approach to design. In general, members of the project management class were in charge of the various projects. The project managers worked with the clients to establish project goals and then worked with

their teams to identify and sequence project tasks. Members of the design class assisted project managers in completing a needs assessment and analysis. Members of the design class also developed a design plan that members of the project management class presented to the client for approval. After the clients approved the various design plans, members of the software development class produced prototypes based on the plan created by the design class. The prototypes were tested with target audiences. The project management class then produced an evaluation report and held a culminating meeting with the design team to reflect on the process and outcomes of the design project.

The distribution of students who were enrolled in three different courses that met on three different nights created challenging issues for communication within each team. Project managers maintained Web sites for each project. These Web sites allowed all team members to view work schedules, drafts of design plans, and prototypes. Team members could communicate with each other and the client through e-mail. An important feature was that, using the Web sites as guides, each group, for the most part, was self-directed and self-sufficient. The professor's role was to serve as a consultant to the teams at various points of difficulty, as a client when quick decisions were necessary regarding project goals or vision, and as a team member when production problems arose. By the end of the semester, the classes had successfully completed seven projects, and students remarked that the process, while arduous, was also meaningful, fun, and afforded them opportunities to learn in ways that were different from those in traditional graduate classes.

Although the experimental approach to teaching these courses had some problems, it was also encouraging to see some of the differences in learning that students experienced. First, the curriculum was composed of problems, not topics. Even the idea of teaching design skills and sensibilities as a topic in a curriculum is problematic because design is not an object of study; design is a mode of inquiry and exploration (Davis, Hawley, McMullan, & Spilka, 1997). Instead of a contrived curriculum presented through an artificial context, it was particularly effective for students to learn in an environment where design tasks and learning goals emerged from the situation at hand, along with constraints and challenges. So while a predetermined curriculum may not be essential, the adoption by a professor of a new pedagogical role is necessary and vital to students' success. Professors serve as facilitators and share their expertise as experienced designers. They can help students establish individual and small-group goals through the use of performance contracts (Rieber, 2000). They can moderate design evaluations, helping and encouraging learners to offer feedback to their peers. Professors can also model design expertise by helping students formulate alternatives for various student decisions as the design process unfolds.

Conclusions

The story told in this chapter has two endings: one for HC and the other for the teaching and learning of a professor and his students. While the ending for HC was a business merger, and eventual closing of the office in Austin, it was not without a

lasting impact. Former employees moved on to continue creating spectacular learning environments at other companies. Some have become or are studying to become college professors, specializing in games for learning and other emerging instructional technologies that emphasize learning experience design. Questions of how designers use principles of learning experience design, and what processes they follow, were answered. The effects of organizational and management factors on creative design and production activities were observed and experiments in teaching with such a metaphor were conducted. These results suggest that a studio approach to support learning experience design is appropriate for a number of reasons, many of which have been argued by others (Brandt et al., 2011; Clinton & Rieber, 2010; Simpson, Burmeister, Boykiw, & Zhu, 2002).

In a teaching model that emphasized authentic learning experiences over direct instruction with exercises, students became designers and developers in many authentic ways. They worked collaboratively, using conversation, argumentation, and persuasion to achieve consensus about perspectives and actions that might move projects forward. Conflicting viewpoints were debated, and differences of opinion were negotiated. In this way, dialog transformed individual thinking, creating collective thought and socially constructed knowledge within the team (Sherry & Myers, 1998). Beyond working collaboratively, the student designers tended to be self-organized both individually and within their collaborative groups (Thomas & Harri-Augstein, 1985). They largely accepted responsibility for their own learning by identifying their own purposes, setting goals for learning, implementing learning strategies, and identifying appropriate resources and tools.

The most noticeable difference observed between learning experience design and more traditional instructional design was the focus of the design teams on larger, more powerful outcomes beyond simple learning objectives (Chen, 2010). If we can accept the challenge to think in broader terms as we approach instructional design opportunities (Wilson, Parrish, & Veletsianos, 2008), then perhaps we can attain the level of aesthetic, transformational learning experiences that many scholars have envisioned, as suggested by Toshiko Mori:

> We have to create an atmosphere and a space where students and teachers can do their most creative work. I compare it to being a film producer instead of a director. … You produce a body of work … by putting people, ingredients, and stories together to make things happen. Education is invisible really. So you have to make certain intellectual, aesthetic, and spiritual investments. (Szenasy, 2003)

Notes

The bulk of the research data described here consisted of field notes (more than 150 handwritten pages in a design journal), along with transcripts of structured interviews with 25 producers, designers, associate producers, and production specialists. In addition, meeting minutes and action lists from design and production meetings, and documentation produced by the participants during various design and production activities were used as part of the data set. Written documentation of information

used by managers for business planning, training, and managing the various design and production teams was also included in the data collection process.

Data was analyzed using a qualitative lens as described by Eisner (1998), following a data reduction process advocated by Miles and Huberman (1994). Data from the interview transcripts, field notes, and documents were coded into categories using a qualitative data analysis software tool. The data were initially parsed to remove any references to common work functions, business logistics, office support, or other non-project information not directly related to design and production (e.g., timesheet, xerox, memo).

Fictional names for people and companies are utilized to maintain the anonymity of participants in the projects described.

About the Authors

Wayne Nelson is currently University Fellow for Online Learning and Assessment at Southern Illinois University Edwardsville, after more than 25 years of teaching educational psychology and instructional technology, as well as serving as a Department Chairman. His research interests have included investigations of the characteristics of learning with various interactive media, and the processes utilized to design learning activities and environments. In addition to teaching and research, he has maintained extensive involvement in efforts to integrate technology into the classrooms and curricula of schools, and as a consultant to a variety of companies about learning, training, and design processes.

David Palumbo has built a career around the creation of profitable and effective learning systems that bridge the paradoxes of learning in a digital age. From his current position as Chief Academic Officer at National Heritage Academies, he concerns himself with leading and managing a corporation devoted to challenging each child to achieve personally in more than 80 charter schools across the nation. As a teacher, research scholar, academic administrator, entrepreneur, consultant, salesman, and corporate executive, Dr. Palumbo has carved a unique global position in the business of learning.

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